DRAINAGE INFORMATION SHEET

710246

PROJECT TITLE: JOHN BROOKS FOOD TOWN ZONE ATLAS/DRNG. FILE #: G14/D49

DRB #: _____ EPC #: _____ WORK ORDER #: _____

LEGAL DESCRIPTION: TR 72, MRGCD MAP NO 33

CITY ADDRESS: 1130 CANDELARIA NW

ENGINEERING FIRM: JEFF MORTENSEN & ASSOC. CONTACT: JEFF MORTENSEN

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

OWNER: BARBARA J. BOCKELMAN CONTACT: RANDALL GAKIN

ADDRESS: c/o 4001 INDIAN SCHOOL RD NE PHONE: _____

ARCHITECT: FANNING BARD LARSEN CONTACT: BILL KOSKOVICH

ADDRESS: 4600 A MONTGOMERY NE PHONE: 883-5200

SURVEYOR: JEFF MORTENSEN & ASSOC CONTACT: JEFF MORTENSEN

ADDRESS: 6010-B MIDWAY PARK BLVD NE PHONE: 345-4250

CONTRACTOR: BRADBURY & STAMM CONTACT: BOB HASAKA

ADDRESS: _____ PHONE: 765-1200

RECEIVED
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HYDROLOGY DIVISION

TYPE OF SUBMITTAL:

- ____ DRAINAGE REPORT
- ____ DRAINAGE PLAN
- ____ CONCEPTUAL GRADING & DRAINAGE PLAN
- ____ GRADING PLAN
- ____ EROSION CONTROL PLAN
- X ENGINEER'S CERTIFICATION
- ____ OTHER

PRE-DESIGN MEETING:

- ____ YES
- ____ NO
- ____ COPY PROVIDED

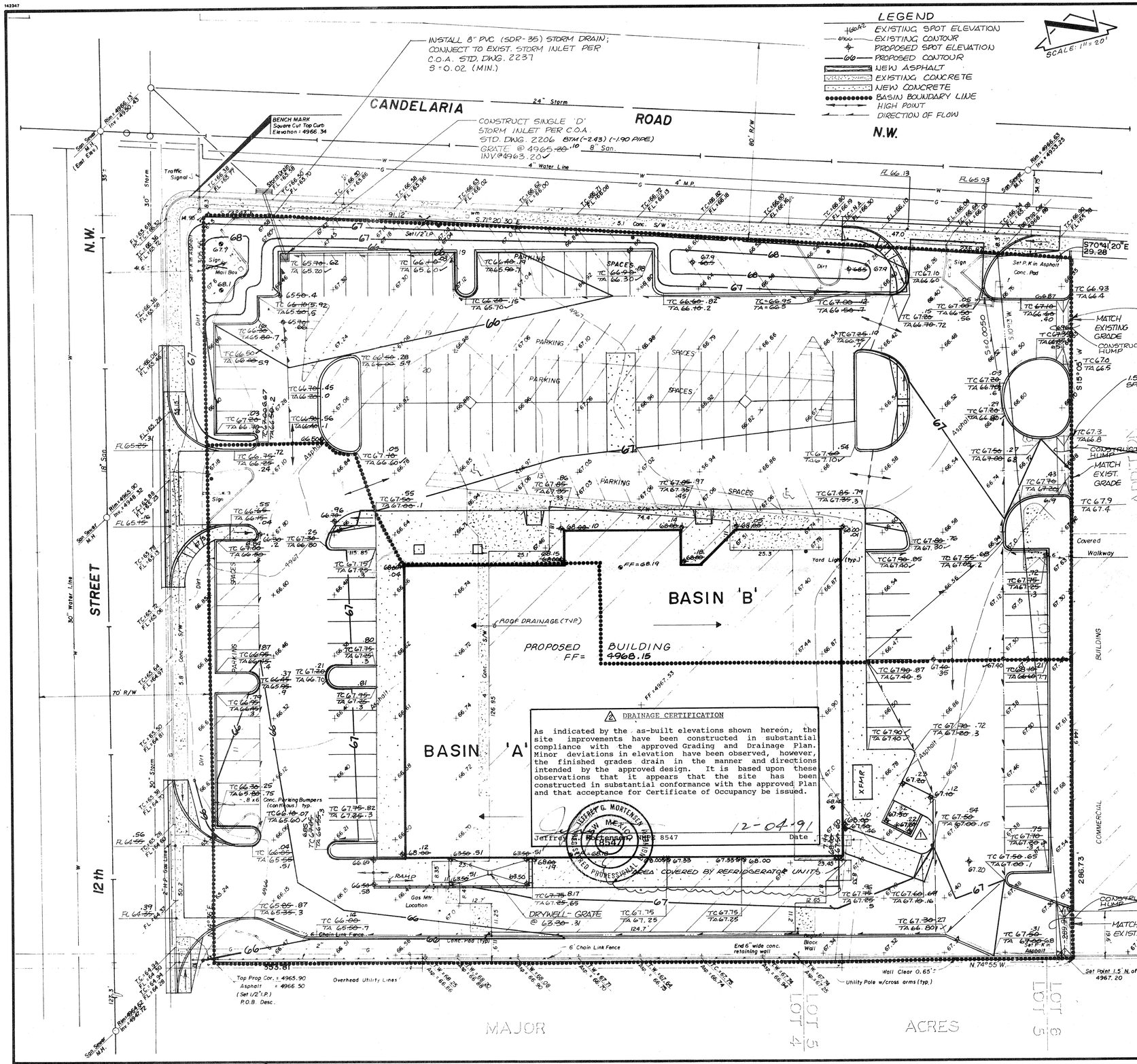
CHECK TYPE OF APPROVAL SOUGHT:

- ____ SKETCH PLAT APPROVAL
- ____ PRELIMINARY PLAT APPROVAL
- ____ S. DEV. PLAN FOR SUB'D. APPROVAL
- ____ S. DEV. PLAN FOR BLDG. PERMIT APPROVAL
- ____ SECTOR PLAN APPROVAL
- ____ FINAL PLAT APPROVAL
- ____ FOUNDATION PERMIT APPROVAL
- ____ BUILDING PERMIT APPROVAL
- X CERTIFICATE OF OCCUPANCY APPROVAL
- ____ GRADING PERMIT APPROVAL
- ____ PAVING PERMIT APPROVAL
- ____ S.A.D. DRAINAGE REPORT
- ____ DRAINAGE REQUIREMENTS
- ____ OTHER _____ (SPECIFY)

DATE SUBMITTED: 12-05-91

BY: JEFFREY G MORTENSEN

142347



LEGEND

- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- NEW ASPHALT
- EXISTING CONCRETE
- NEW CONCRETE
- BASIN BOUNDARY LINE
- HIGH POINT
- DIRECTION OF FLOW

SCALE: 1" = 20'

LEGAL DESCRIPTION

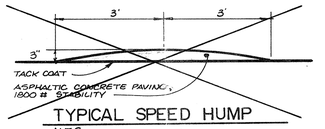
TRACT 72, MRGCD MAP NO. 33 & A TRIANGULAR TRACT COMPRISING THE WESTERLY PORTION OF LOT 16, BLOCK 'C', THE DAVIDSON ADD'N.

PROJECT BENCHMARK = TBM

A SQUARE ☐, CHISLED ON TOP OF CONC. CURB, AT THE NW'N CURB RETURN, AT THE INTERSECTION OF CANDELARIA RD. AND 12TH ST. N.W.

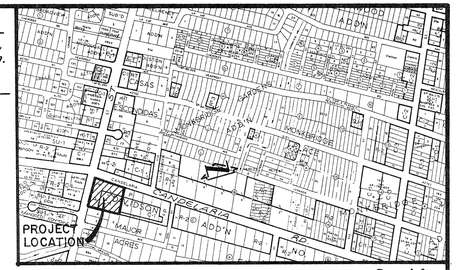
BENCHMARK NO. B-614

ELEVATION: 4966.486 FEET (MSLD)



TYPICAL SPEED HUMP

N.T.S. NOT BUILT



VICINITY MAP G-14

SCALE: 1" = 800' (APPROX.)

DRAINAGE PLAN

The following items concerning the John Brooks Food Town Store No. 3 Drainage Plan are contained hereon:

1) Vicinity Map 2) Grading Plan 3) Demolition Plan 4) Existing Conditions Plan 5) Calculations

As shown by the Vicinity Map, the site is located at the southeast corner of the intersection of Candelaria Road N.W. and 12th Street N.W. At present, the site consists of an abandoned building slab and asphalt paving. This site previously contained the John Brooks Food Town Store No. 3. A fire recently demolished the store and the land has been vacant since. This project consists of the renovation of the property and the construction of a new building on the same site.

As shown by Panel 22 of 50 of the National Flood Insurance Program Flood Boundary and Floodway Maps for the City of Albuquerque, New Mexico, dated October 14, 1983, this site does not lie within a designated 100-year floodplain. The site does, however, lie within the designated 500-year floodplain. Furthermore, it does not appear that the site contributes runoff to a 100-year floodplain.

The grading plan shows 1) existing grades indicated by contours and spot elevations at 1'0" intervals as taken from a survey prepared by Ross Howard Company dated March 25, 1991, and amended March 31, 1991, 2) the limit and character of the existing improvements as determined from said Ross Howard Company survey, 3) proposed grades indicated by spot elevations and contours at 1'0" intervals, 4) developed drainage basin boundaries, and 5) continuity between existing and proposed grades. As shown by the existing conditions and demolition plan, the proposed development will involve the complete demolition of the existing improvements on the site. The proposed improvements will consist of the construction of a new facility on the property. The building and landscaping areas will increase while the area of paving will decrease. The redevelopment of this site will adjust the drainage basin boundaries on the site. These adjustments will have negligible impact on the runoff which exits the site into the adjacent streets. Basin A will continue to discharge to 12th Street N.W. while Basin B will continue to discharge to Candelaria Road N.W. Developed runoff will discharge from the site via private entrances along with a private storm drain connection to an existing storm inlet within Candelaria Road N.W.

The calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used to quantify the peak rate of discharge while the SCS Method has been used to quantify the volume of runoff generated. Both methods have been used in accordance with the City of Albuquerque Development Process Manual, Volume II, coupled with the Mayor's Emergency Rule dated January 14, 1986. As shown by these calculations, the development of this property will have a negligible impact on the runoff generated by this site. The capacity of the 8" private storm drain has been calculated using the Orifice Equation. The capacity of this line is approximately 1.1 cfs below the estimated 100-year peak discharge from Basin B. Runoff will then pond within the parking lot and overflow the ridgelines as shown on the grading plan and then discharge from the site via the private entrances.

DRAINAGE CERTIFICATION

As indicated by the as-built elevations shown hereon, the site improvements have been constructed in substantial compliance with the approved Grading and Drainage Plan. Minor deviations in elevation have been observed, however, the finished grades drain in the manner and directions intended by the approved design. It is based upon these observations that it appears that the site has been constructed in substantial conformance with the approved Plan and that acceptance for Certificate of Occupancy be issued.

Jeffrey G. Mortensen, NMPE 8547 — Date 12-04-91

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

05-28-91

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CALCULATIONS

Ground Cover Information

From SCS Bernalillo County Soil Survey,
Plate 20: Gb (Gila series)
Hydrologic Soil Group: B
Existing Pervious CN = 82 (DPM Plate 22.2 C-2
Streets & Roads: Dirt condition)
Developed Pervious CN = 61 (DPM Plate 22.2 C-2
Open Spaces: good condition)

Time of Concentration/Time to Peak

$T_c = 0.0078\ L^{0.77}/s^{0.385}$ (Kirpich Equation)
$T_p = T_c = 10$ min.

Rational Method

Discharge: $Q = CiA$
where C varies
$i = P_6\ (6.84)\ T_c^{-0.51} = 4.65$ in/hr
$P_6 = 2.2$ in (DPM Plate 22.2D-1)
$T_c = 10$ min (minimum)
A = area, acres

Existing Condition (Sheet 2)

1. Basin A
Atotal = 48,950 sf = 1.12 Ac
Roof area = 10,900 sf (0.22)
Paved area = 37,300 sf (0.76)
Undeveloped area = 750 sf (0.02)
C = 0.93 (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = 0.93(4.65)(1.12) = 4.8$ cfs
Aimp = 48,200 sf; % impervious = 98 %
Composite CN = 98 (DPM Plate 22.2 C-2)
DRO = 2.1 in (DPM Plate 22.2 C-4)
$V_{100} = 3630\ (DRO)A = 8,537$ cf

2. Basin B
Atotal = 55,650 sf = 1.28 Ac
Roof area = 10,350 sf (0.19)
Paved area = 44,950 sf (0.81)
Undeveloped area = 350 sf (0.00)
C = 0.94 (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = 0.94(4.65)(1.28) = 5.6$ cfs
Aimp = 55,300 sf; % impervious = 99 %
Composite CN = 98 (DPM Plate 22.2 C-2)
DRO = 2.0 in (DPM Plate 22.2 C-4)
$V_{100} = 3630\ (DRO)A = 9,293$ cf

Comparison

1. Basin A
$\Delta Q_{100} = 5.1 - 4.8 = 0.3$ cfs (increase)
$\Delta V_{100} = 8,537 - 8,037 = 500$ cf (decrease)

2. Basin B
$\Delta Q_{100} = 5.6 - 4.7 = 0.9$ cfs (decrease)
$\Delta V_{100} = 9,293 - 6,425 = 2,868$ cf (decrease)

Point Rainfall

$P_6 = 2.2$ in. (DPM Plate 22.2 D-1)

SCS Method

Volume: V = 3630(DRO) A
Where DRO = Direct runoff in inches
A = area, acres

Developed Condition (Sheet 1)

1. Basin A
Atotal = 53,400 sf = 1.23 Ac
Roof area = 17,600 sf (0.33)
Paved area = 32,750 sf (0.61)
Landscaped area = 3,050 sf (0.06)
C = 0.89 (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = 0.89(4.65)(1.23) = 5.1$ cfs
Aimp = 50,350 sf; % impervious = 94 %
Composite CN = 96 (DPM Plate 22.2 C-2)
DRO = 1.8 in (DPM Plate 22.2 C-4)
$V_{100} = 3630\ (DRO)A = 8,037$ cf

2. Basin B
Atotal = 51,200 sf = 1.18 Ac
Roof area = 5,300 sf (0.10)
Paved area = 39,150 sf (0.77)
Landscaped area = 6,750 sf (0.13)
C = 0.85 (Weighted average per Emergency Rule, 1/14/86)
$Q_{100} = CiA = 0.85(4.65)(1.18) = 4.7$ cfs
Aimp = 44,450 sf; % impervious = 87 %
Composite CN = 93 (DPM Plate 22.2 C-2)
DRO = 1.5 in (DPM Plate 22.2 C-4)
$V_{100} = 3630\ (DRO)A = 6,425$ cf

Private Storm Drain Hydraulics

$Q = CA\sqrt{2gh} = 3.6$ cfs $> Q_{100}$
Where C = 0.75
A = 0.3491 sf (8" dia)
g = 32.2 ft/sec²
h = 66.5 - 63.2 - 0.33 = 3'

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS & SURVEYORS (505)345-4250

GRADING & DRAINAGE PLAN

JOHN BROOKS FOOD TOWN STORE NO.3

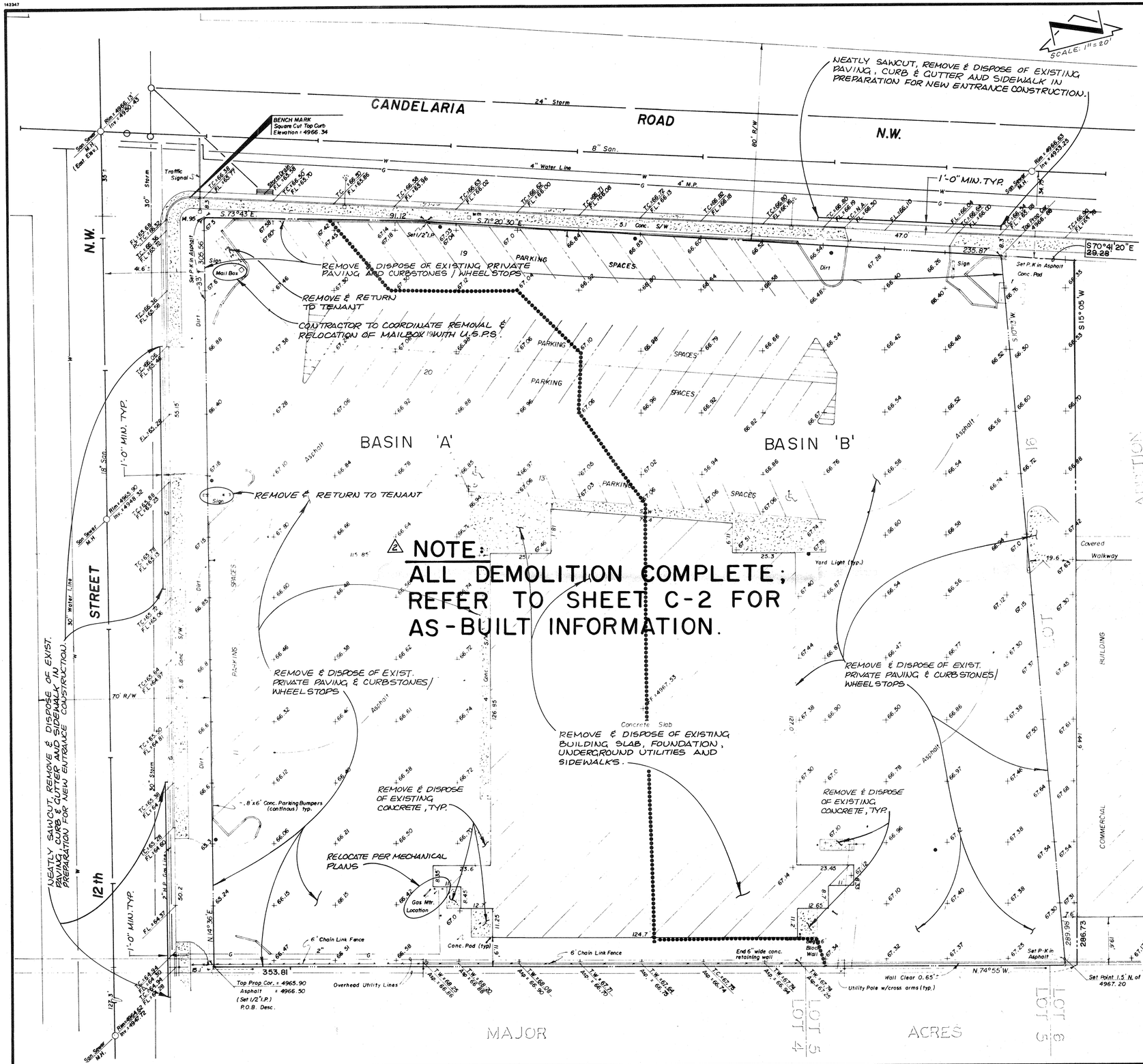
APPROVALS	NAME	DATE
A.C.E. / DESIGN		
INSPECTOR		
A.C.E. / FIELD		

DESIGNED BY JGM
DRAWN BY MJT
APPROVED BY JGM

NO.	DATE	BY	REVISIONS
1	05/91	J.G.M.	RELOCATE REFUSE PAD AND REGRADE
2	12/91	JGM	AS-BUILT & CERTIFY

JOB NO. 910241
DATE 04-1991
SHEET 3 OF 29
C-2

142347



Demolition and Construction Notes:

1. All work detailed on these plans to be performed under contract shall, except as otherwise stated or provided for hereon, be constructed in accordance with the New Mexico Standard Specifications for Public Works Construction - 1987, published by the New Mexico Chapter American Public Works Association.

2. Two (2) working days prior to any excavation, contractor must contact New Mexico One Call Service, 260-1990, for location of existing utilities.

3. If any utility lines, pipelines, or underground utility lines are shown on these drawings, they are shown in an approximate manner only, and such lines may exist where none are shown. If any such existing lines are shown, the location is based upon information provided by the owner of said utility, and the information may be incomplete, or may be obsolete by the time construction commences. The engineer has conducted only preliminary investigation of the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines. This investigation is not conclusive, and may not be complete, therefore, makes no representation pertaining thereto, and assumes no responsibility or liability therefor. The contractor shall inform itself of the location of any utility line, pipeline, or underground utility line in or near the area of the work in advance of and during excavation work. The contractor is fully responsible for any and all damage caused by its failure to locate, identify and preserve any and all existing utilities, pipelines, and underground utility lines. In planning and conducting excavation, the contractor shall comply with state statutes, municipal and local ordinances, rules and regulations, if any, pertaining to the location of these lines and facilities.

4. Should a conflict exist between these plans and actual field conditions, the contractor shall promptly notify the engineer in writing so that the conflict can be resolved with a minimum amount of delay for all parties.

5. The contractor shall maintain access to all buildings and adjacent properties during construction.

6. All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning safety and health.

7. The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property. This can be achieved by constructing and maintaining temporary berms at the property lines and wetting the soil to keep it from blowing.

8. The contractor shall promptly clean up any material excavated within the public right-of-way so that the excavated material is not susceptible to being washed down the street.

9. The contractor shall secure a "Topsoil Disturbance Permit" prior to beginning construction.

10. Contractor shall notify the engineer not less than seven (7) days prior to starting work in order that the engineer may take necessary steps to ensure the preservation of survey monuments. Contractor shall not disturb permanent survey monuments without the consent of the engineer and shall notify the engineer and bear the expense of replacing any that may be disturbed without permission. Replacement shall be done only by the engineer. When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument is located, contractor shall, at his own expense, adjust the monument cover to the new grade unless otherwise specified.

11. If the removal of existing curb and gutter, sidewalk, and/or paving is required, the contractor shall sawcut and/or remove to the nearest joint. When abutting new pavement to existing, the contractor shall cut back the existing paving to a straight line in order to remove any broken or cracked pavement. Curb and gutter and/or pavement shown as existing and not to be removed under this contract and which is damaged or displaced by the contractor shall be removed and replaced by the contractor at the contractor's expense.

12. A disposal site for all excess excavation material (contaminated or otherwise), asphaltic paving, concrete paving, etc. shall be obtained by the contractor in compliance with applicable regulations. All costs incurred in obtaining a disposal site and in haul thereto shall be considered incidental to construction, therefore, no separate payment shall be made.

13. In lieu of removal and disposal of the onsite asphalt paving, the contractor may pulverize the existing material in site to a maximum particle size of two (2) inches and then thoroughly blend the pulverized material into the top four (4) inches of subgrade. The blended pulverized material may then be regraded and transported about the site as necessary to attain the grades shown on the grading plan.

14. A borrow site for import material shall be obtained by the contractor in compliance with applicable regulations. All costs incurred in obtaining a borrow site and in haul thereto shall be considered incidental to construction, therefore, no separate payment shall be made.

15. The contractor shall be responsible for safely obtaining the required compaction. The contractor shall select and use methods which shall not be injurious or damaging to the existing facilities and structures which surround the work areas.

16. The contractor shall confine his work within the construction limits in order to preserve the existing improvements and so as not to interfere with the operations of the existing facilities.

17. An Excavation/Construction Permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.

18. Backfill compaction shall be according to arterial street use.

19. Maintenance of these facilities shall be the responsibility of the owner of the property served.

20. The design of planters and landscaped areas is not part of this plan. All planters and landscaped areas adjacent to the building(s) shall be provided with positive drainage to avoid any ponding adjacent to the structure. For construction details, refer to landscaping plan.

21. **Caution: These drawings do not include necessary components for construction safety which shall remain the responsibility of the contractor.**

DRAINAGE CERTIFICATION

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Jeffrey G. Mortensen, NMPE #8547 — 12-04-91 Date

JEFFREY G. MORTENSEN NEW MEXICO 8547 REGISTERED PROFESSIONAL ENGINEER

5-27-91

JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS & SURVEYORS (505)345-4250

DEMOLITION PLAN / EXISTING CONDITIONS / NOTES

JOHN BROOKS FOOD TOWN STORE NO.3

APPROVALS	NAME	DATE
A.C.E. / DESIGN		
INSPECTOR		
A.C.E. / FIELD		

DESIGNED BY JGM
DRAWN BY MJT
APPROVED BY JGM

NO.	DATE	BY	REVISIONS
2	11-91	JGM	AS-BUILT AND CERTIFY

JOB NO. 910241
DATE 04-1991
SHEET 4 OF 29
C-3